even earlier representatives of these families. Fig. 3G (p. 51) illustrating a series of mammalian teeth will illustrate the above remarks. That there is such a convergence in tooth structure shows that it is, theoretically at least, possible to determine the ancestral form of the mammalian tooth. Practically, however, the difficulties which beset such theorising are great ; that there are such divergent and such strongly-held antithetical views is sufficient proof of this. Two main views hold the field: one, which has found most favour in America, and is due chiefly to the labours and persuasiveness of Professors Cope, Scott, Osborn, and Others, is

FIG. 38.—Molar teeth of A, *Phenacodus,* and B, the Creodont *Pcdaeonictis. JSnd,* endoconid; *hid,* hypocoimlid ; *hyd>* hypotrituberculy.

The alternative suggested by Forsyth Major, Woodward, and G-oodrich, attempts to show that the dentition of the original niammal included grinding teeth which were multicuspidate or "multitubercular." There is much to be said for both views, and something to be said against both. This question is, however, wrapped up in a wider one. Its solution depends upon the ancestry of mammals. If the Mammalia are to be derived from reptiles with simple conical teeth, then the first stage in the' development of tritubercuIy is proved. On the other hand, however, the evidence is gradually growing that the Theromorpha represent more nearly than any non-mammalian group with which we are acquainted the probable ancestral form of the mammals. These animals offer some support to both the leading views, *Cyfn>ogeyict,€hu$* had triconodont teeth which, as will be pointed out later, are a theoretically intermediate stage in the evolution of tritubercular teeth; on the other hand, the teeth of *JEHademodon* and some others are multituberculate, and have been very properly compared to the

multitubercular teeth of such primitive mammalia as the Oraitho-
rhynchus. Professor Osborn is no doubt correct in italicising a
remark of an anonymous writer in *Science* to the effect that in
Dicutemodon the teeth, though multitubercular, show the pre-
valence of three cusps arranged in fclie tritxibereular fashion,

[1] Bee for a Btutmaary, Osbom, *Atuwrfaaw, Wat,* Doc. 1897, p. 993,